

OFFSHORE

Work Order ID 137570

137570

Page 1

October 06, 2015 3:46:19 PM

Item ID: D3535-13 Accept *N9000040100* Setup Start *NS1*

Revision ID: Stop *NS2*

Item Name: Wearplate Fwd

Start Date: 10/6/2015 Start Qty: 4.00 *4* Cust Item ID:

Required Date: 10/13/2015 Req'd Qty: 4.00 *4* Customer:

Reference:

Approvals: Process Plan: SH Date: 10/15/2015 Tooling: _____ Date: _____ Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3535	Rev B

100

0.00

100

FLOW WATER JET

Waterjet

Memo

0.02

FLOW CNC Waterjet

1-Cut as per Dwg D3535 Dwg Rev: B Prog Rev: B 2-
Deburr if necessary

(4)

10/15/07

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

(4)

10/15/07

120

QC8- Inspect parts - second check

0.00

120

QC

Memo

0.00

Quality Control

(4)

DAS
38
9-89

OCT 08 2015

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
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Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

Work Order ID 137570

October 06, 2015 3:46:19 PM

137570

Page 3

Item ID: D3535-13 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Wearplate Fwd
Start Date: 10/6/2015 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 10/13/2015 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160	QC3- Inspect Part Finish	0.00							
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160

QC

Memo

0.00

Quality Control

OCT 16 2015

170	Identify as per dwg & Stock Location: <u>FP002</u>	0.00							
-----	--	------	--	--	--	--	--	--	--

170

Packaging

Memo

0.00

Packaging

LOCATION : FP002

OCT 20 2015

180	QC21- Final Inspection - Work Order Release	0.00							
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180

QC

Memo

0.01

Quality Control

MCS OCT 21 2015

20151020
SA

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : _____									

Picklist Print

October 06, 2015 3:46:24 PM

Page 1

Work Order ID: 137570

137570

Parent Item: D3535-13

D3535-13

Parent Item Name: Wearplate Fwd

Start Date: 10/6/2015

Required Date: 10/13/2015

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A New Issue 07-02-15 JLM
IPP Rev:B As per Rev B 07-08-31 JLM Verified By:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S20GA		Purchased	No			100	sf	297.3323	0.8505	3.581053			

M304S20GA

304/316 .040 Sheet

10/15/10/88

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT	11.2	
m131700	11.2	
MAT020	286.1323	
m130345	1.3139	
m131060	90.2484	
m132387	194.57	

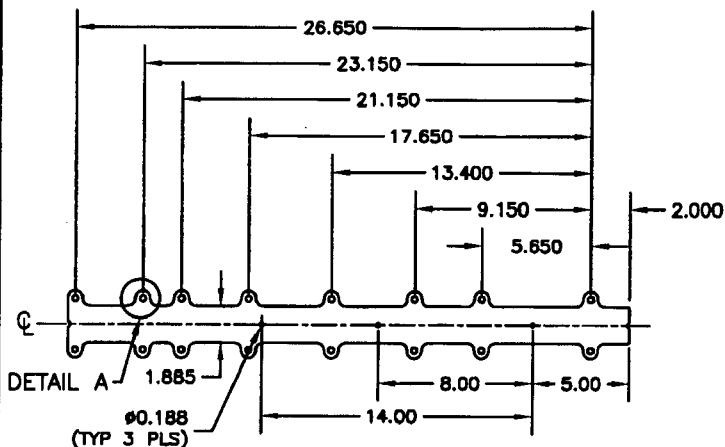
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DART

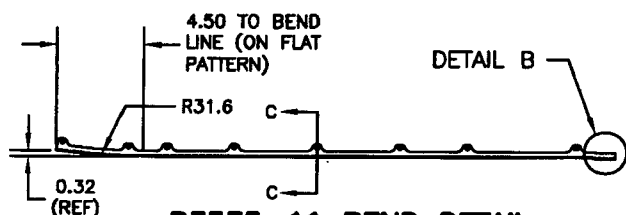
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07.04.24

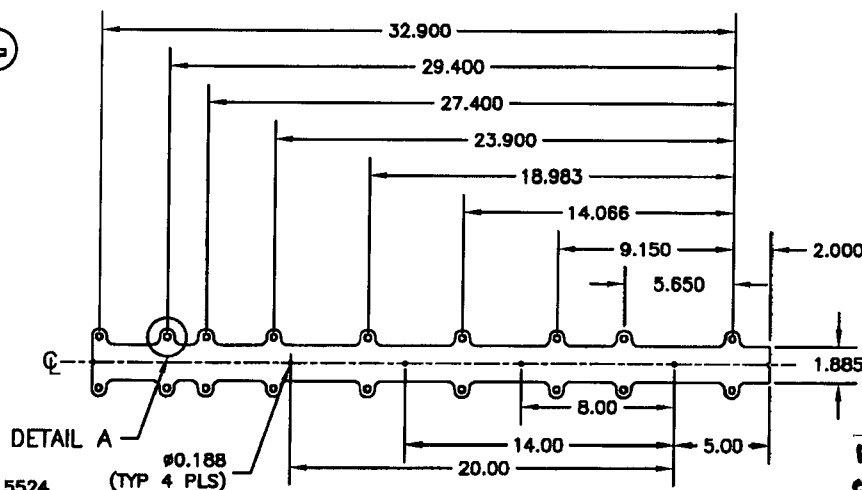
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CHECKED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>	PORT HADLOCK, WA
DATE	07.04.17	DRAWING NO.	D3535	REV. B
TITLE	WEARSHOE	SHEET 1 OF 7		SCALE 1:10
A	06.10.25	NEW ISSUE		
B	07.04.17	MOVE TAB OUTBOARD, ADD AMS SPEC		



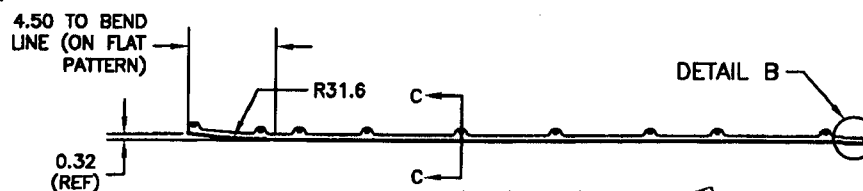
D3535-11F FLAT PATTERN



D3535-11 BEND DETAIL



D3535-13F FLAT PATTERN



D3535-13 BEND DETAIL

120151006 SH
137570

NOTES

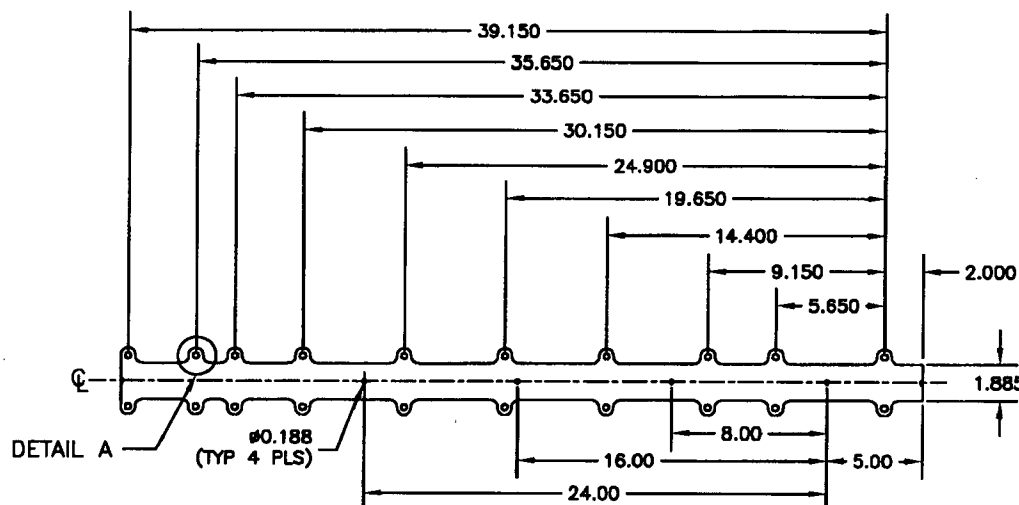
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- 2) FINISH: POWDER COAT GREY SANDTEX (4.3.5.6) PER QSI 005 4.3
- 3) PART IS SYMMETRICAL ABOUT C
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES TO 0.010 MAX
- 7) IDENTIFY WITH DART P/N USING WHITE FINE POINT PAINT MARKER
- 8) SEE PAGE 7 FOR DETAILS AND SECTION



RELEASED

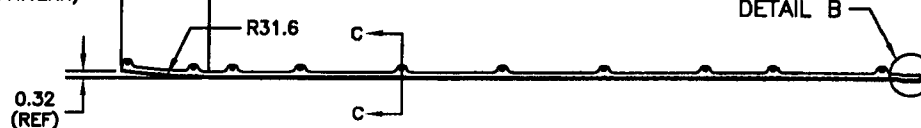
07.04.24

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CHECKED		APPROVED		PORT HADLOCK, WA
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		TITLE	WEARSHOE	SHEET 2 OF 7
		SCALE	1:10	

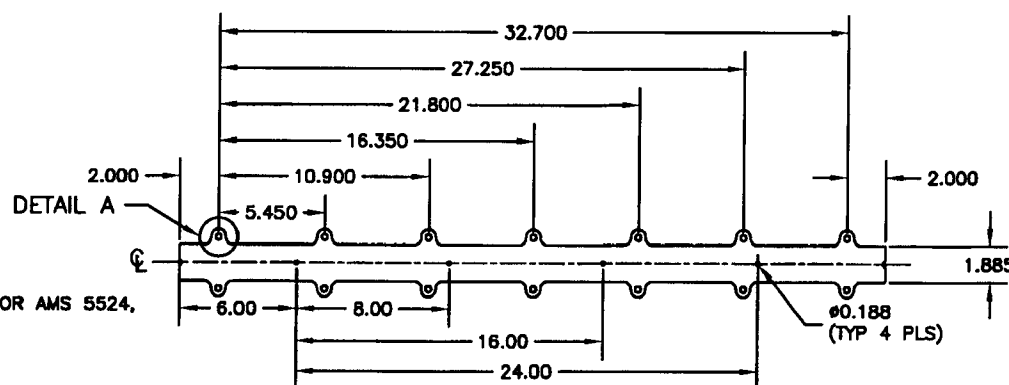


D3535-15F FLAT PATTERN

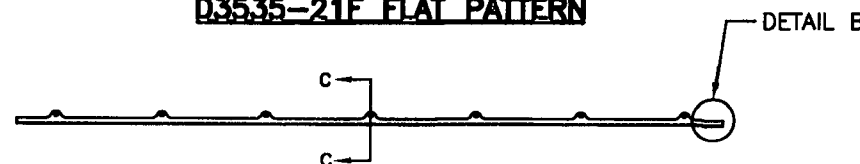
4.50 TO BEND
LINE (ON FLAT
PATTERN)



D3535-15 BEND DETAIL



D3535-21F FLAT PATTERN



D3535-21 BEND DETAIL

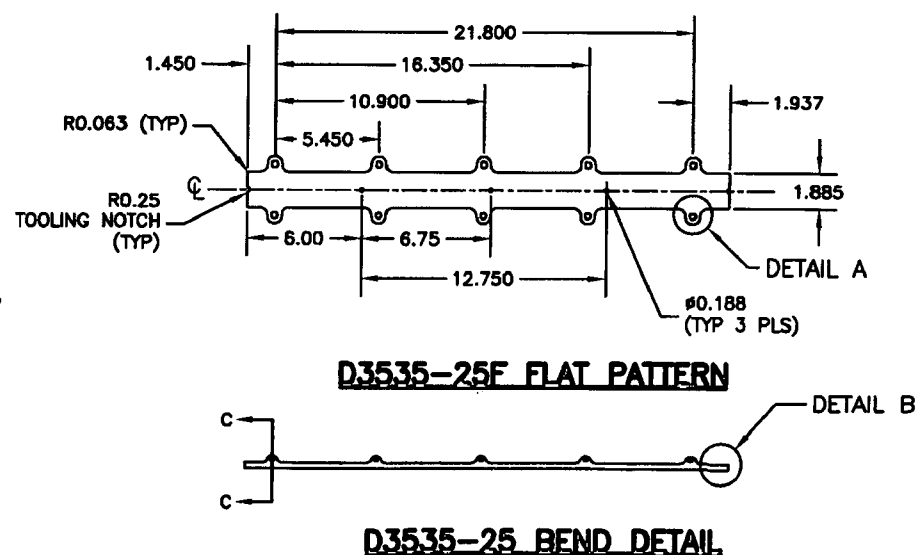
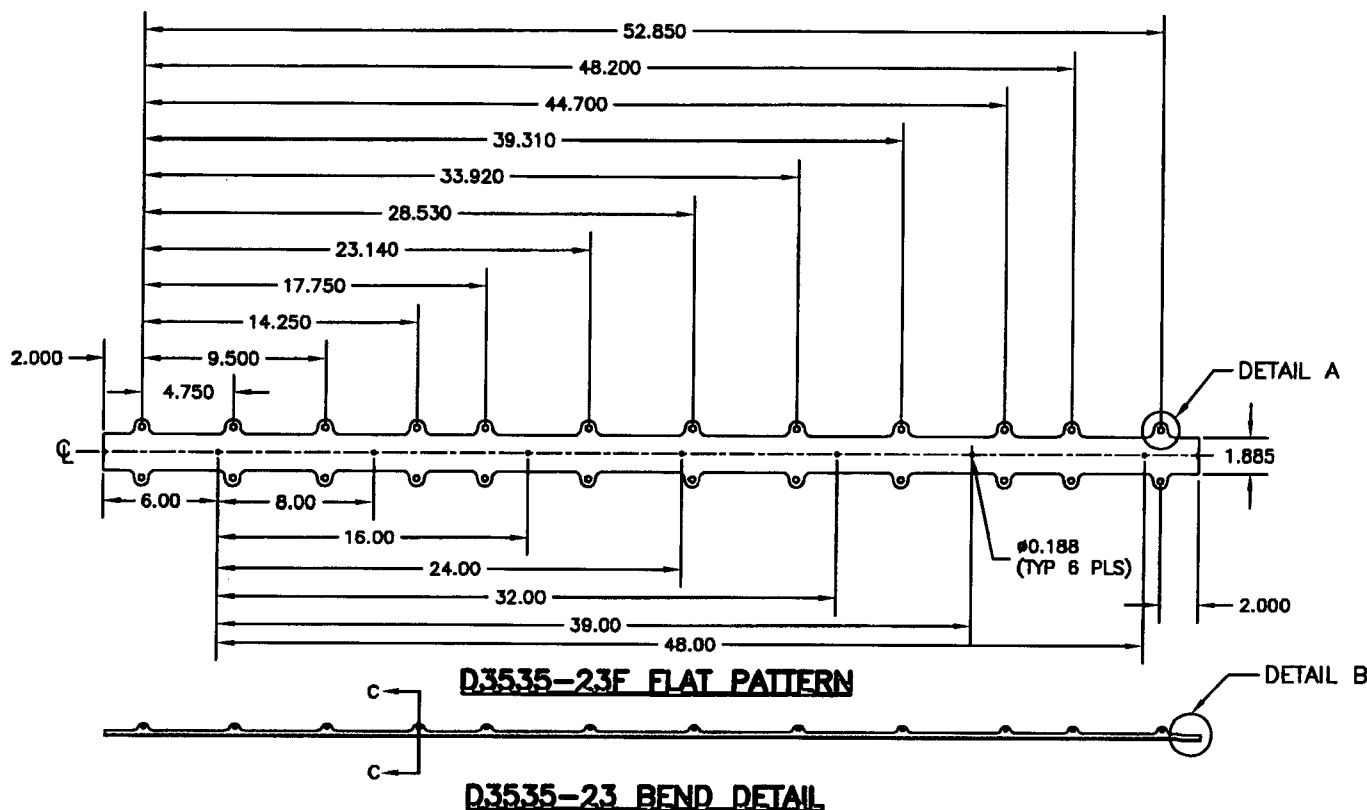
NOTES

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- 8) SEE PAGE 7 FOR DETAILS AND SECTION



RELEASED

07.04.24



NOTES

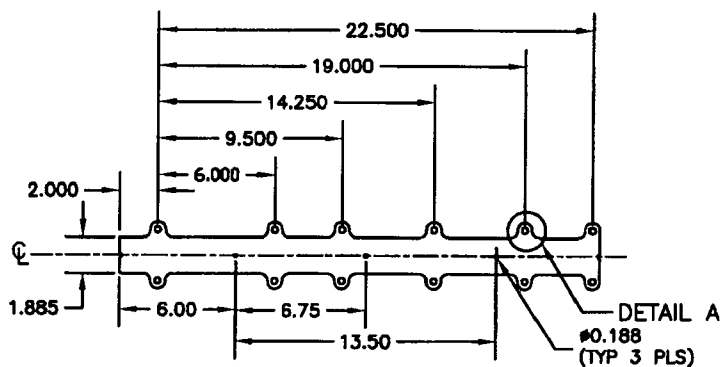
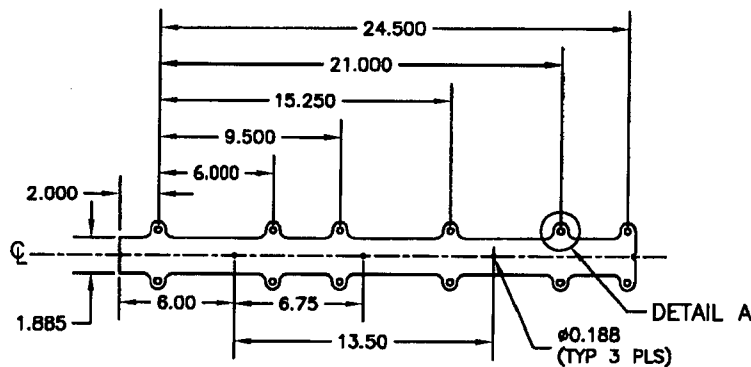
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CB	PH	PORT HADLOCK, WA
CHECKED	APPROVED	DRAWING NO.
PH	PH	D3535
DATE	TITLE	SHEET 3 OF 7
07.04.17	WEARSHOE	SCALE 1:10

DART

RELEASED

07.04.24

**D3535-31F FLAT PATTERN****D3535-31 BEND DETAIL****D3535-33F FLAT PATTERN****D3535-33 BEND DETAIL****NOTES**

- 1) MATERIAL: AISI 304/316 SS SHEET PER AMS 5513 OR AMS 5524, 20 GAUGE (0.038 THICK)
(REF DART SPEC M304S20GA)
- 2) FINISH: POWDER COAT GREY SANDTEX (4.3.5.6) PER QSI 005 4.3
- 3) PART IS SYMMETRICAL ABOUT $\bar{C}$
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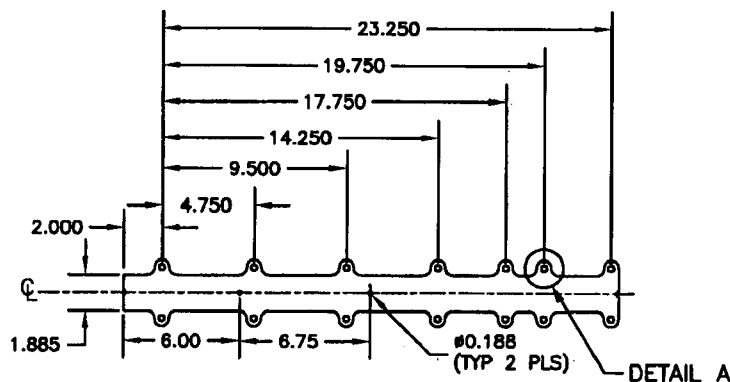
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CHECKED		APPROVED		PORT HADLOCK, WA	
DATE	07.04.17	TITLE	D3535	DRAWING NO.	REV. B
			WEARSHOE	SHEET 4 OF 7	SCALE
					1:10

DART

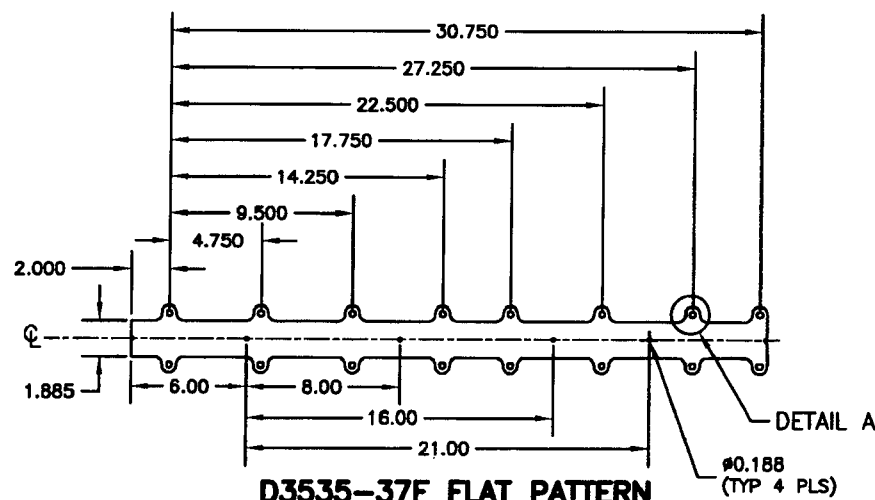
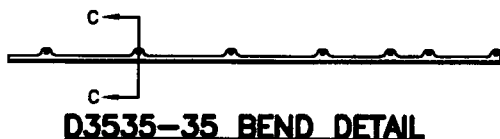
RELEASED

07.04.24

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CHECKED		APPROVED		PORT HADLOCK, WA
DATE	07.04.17	DRAWING NO.	D3535	REV. B
		TITLE	WEARSHOE	SHEET 5 OF 7
		SCALE	1:10	



D3535-35F FLAT PATTERN



D3535-37F FLAT PATTERN



NOTES

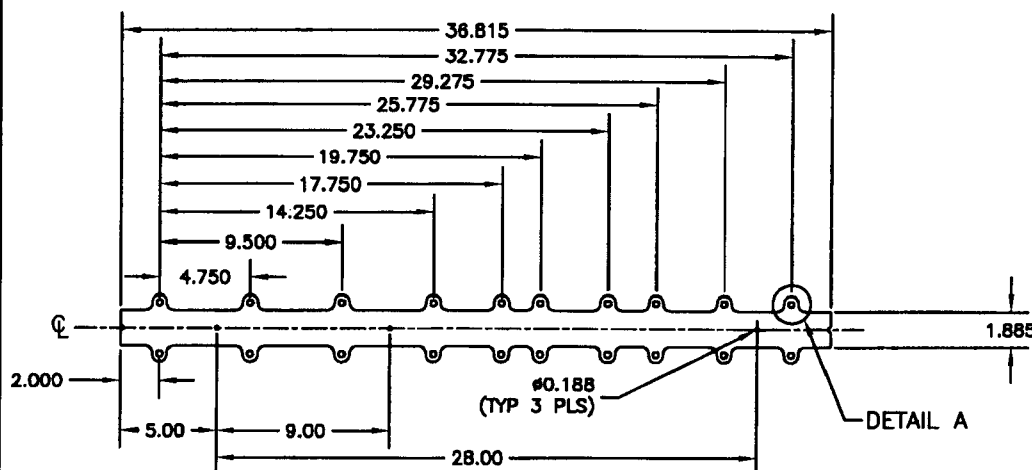
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(REF DART SPEC M304S20GA)
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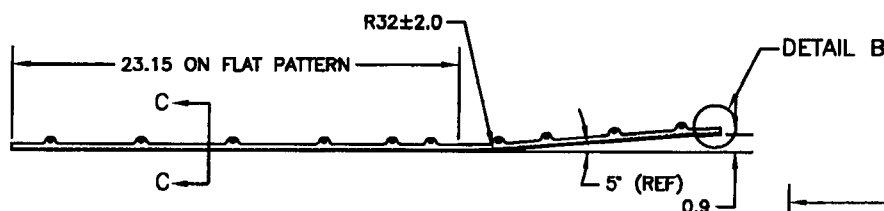
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07.04.17

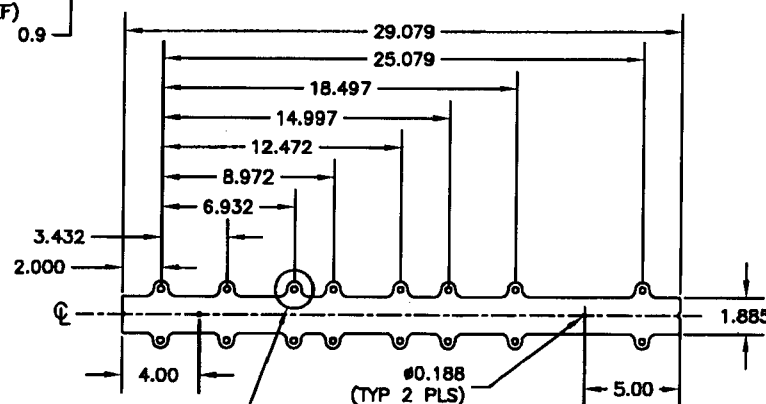
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TITLE	WEARSHOE	SHEET	6 OF 7	SCALE
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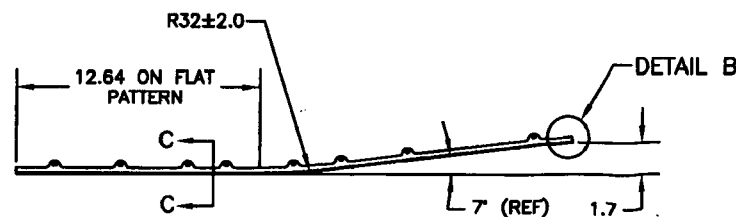
D3535-39F FLAT PATTERN



D3535-39 BEND DETAIL



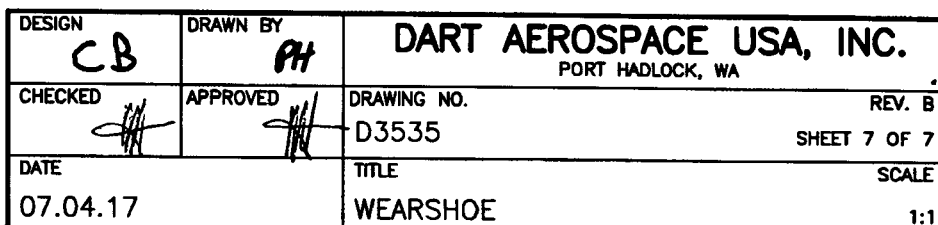
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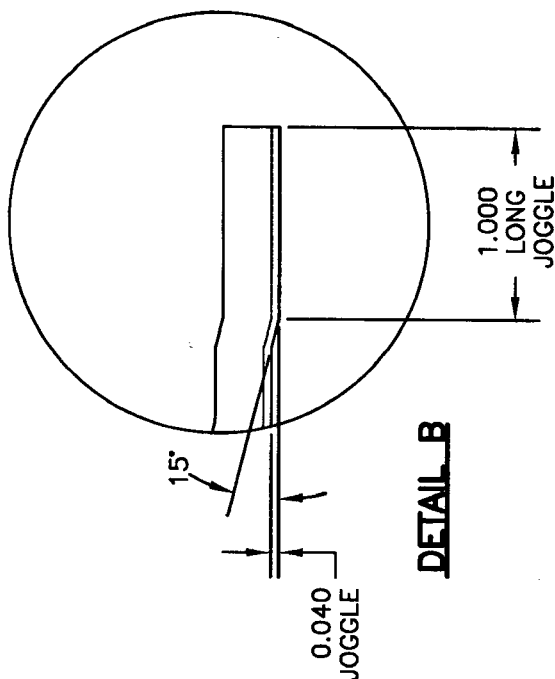
D3535-41 BEND DETAIL

NOTES

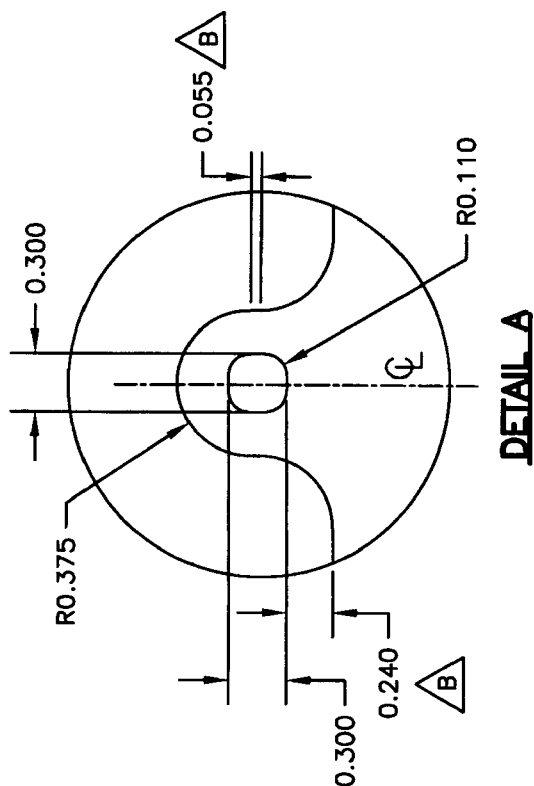
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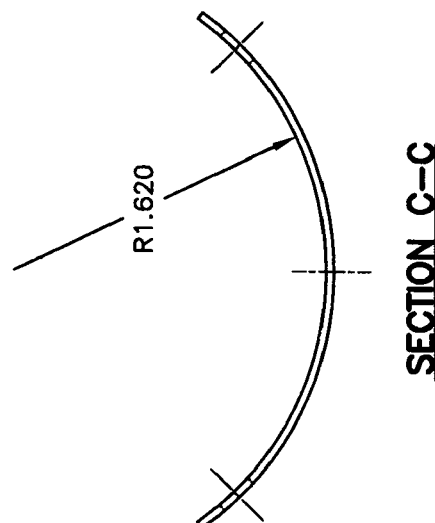
07.04.24



DETAIL B



DETAIL A



SECTION C-C

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DART AEROSPACE LTD		Work Order:	137570
Description: Wearshoe		Part Number:	D3535-13
Inspection Dwg: D3535 Rev: B		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.885	+/-0.010	1.885	/		V: A-02	
2.000	+/-0.010	2.002	/		V: A-01	
5.650	+/-0.010	5.653	/		Tape	
9.150	+/-0.010	9.154	/			
14.066	+/-0.010	14.066	/			
18.983	+/-0.010	18.983	/			
23.900	+/-0.010	23.900	/			
27.400	+/-0.010	27.400	/			
29.400	+/-0.010	29.400	/			
32.900	+/-0.010	32.900	/			
Ø0.188	+0.005/-0.001	Ø.188	/			
20.00	+/-0.030	20.00	/			
14.00	+/-0.030	14.00	/			
8.00	+/-0.030	8.00	/			
5.00	+/-0.030	5.00	/			
0.300	+/-0.010	.299	/			
0.300	+/-0.010	.302	/			
0.038	+/-0.010	.034	/			

Measured by:	Audited by:	Prototype Approval:	
Date:	Date:	Date:	
15/10/07	OCT 08 2015	N/A	N/A

Rev	Date	Change	Revised by	Approved
A	08.04.15	New Issue	KJ/DD	